

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0078034; AI 40456; PER20080001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The permitting authority for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. **THE APPLICANT IS:** Total Environmental Solutions, Inc.
 Hummingbird Subdivision
 P.O. Box 14056
 Baton Rouge, LA 70898

- II. **PREPARED BY:** Eura DeHart

- DATE PREPARED:** November 26, 2008

- III. **PERMIT ACTION:** reissue LPDES permit LA0078034, AI 40456; PER20080001

 LPDES application received: June 19, 2008

 EPA has not retained enforcement authority.

 LPDES permit issued: February 3, 2004
 LPDES permit expires: February 28, 2009

IV. **FACILITY INFORMATION:**

- A. The application is for the discharge of treated sanitary wastewater from an existing privately owned treatment works serving the Hummingbird Subdivision.

- B. The permit application does not indicate the receipt of industrial wastewater.

- C. The facility is located on Hummingbird Lane, off West Broussard Road in Lafayette, Lafayette Parish.

- D. The treatment facility consists of an extended aeration mechanical sewage treatment plant. Disinfection is by chlorination.

- E. **Outfall 001**

Discharge Location: Latitude 30° 10' 21" North
 Longitude 92° 5' 55" West

Description: treated sanitary wastewater

Expected Flow: 16 Homes x 400 GPD = 0.0064 MGD
 19 3-BR apts. x 400 GPD = 0.0076 MGD

Total Expected Flow: 0.0140 MGD

Calculations for gallons per day were based upon figures obtained from Chapter 15 of the State of Louisiana Sanitary Code, Department of Health and Hospitals, Office of Public Health.

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Type of Flow Measurement which the facility is currently using:
V-Notch Weir or stopwatch & bucket

V. RECEIVING WATERS:

The discharge is into an unnamed ditch, thence into Coulee Ile Des Cannes thence into the Vermilion River in segment 060802 of the Vermilion - Teche Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 060802 of the Vermilion - Teche Basin are as indicated in the table below^{1/}:

Degree of Support of Each Use						
Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Not Supported	Not Supported	Not Supported	N/A	N/A	N/A	Full

^{1/}The designated uses and degree of support for Segment 060802 of the Vermilion - Teche Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 060802 of the Vermilion - Teche Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 24, 2007 from Boggs (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

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VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mr. Eura DeHart
Water Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

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IX. PROPOSED PERMIT LIMITS:**Final Effluent Limits:**

Subsegment 060802, Vermilion River – From New Flanders (Ambassador Caffery) Bridge, Hwy. 3073 to Intracoastal Waterway, is not listed on LDEQ's Final 2006 303(d) List as impaired. However, subsegment 060802 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/low DO, pathogen indicators, suspended solids/turbidity/ siltation, and carbofuran for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDLs have been established for subsegment 060802:

Vermilion River TMDLs for Dissolved Oxygen and Nitrogen for Subsegments 060801 and 060802

LDEQ issued a declaratory ruling on April 29, 1996 which stated, "That DO directly correlates with overall nutrient impact is a well-established biological and ecological principle. Thus, when the LDEQ maintains and protects DO, the LDEQ is in effect also limiting and controlling nutrient concentrations and impacts." The nitrogen loading required to maintain the dissolved oxygen standards is the nitrogen TMDL.

1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen

This TMDL was revised in December 1999, and approved by EPA on April 5, 2001. This TMDL re-established that NPDES permits for individual point sources in the Vermilion Watershed should continue to be issued on the basis of flow rates as follows:

<u>FLOW RATE</u>	<u>PERMIT LIMITS</u>
greater than 25,000 gpd	May – Dec.: 10 mg/l CBOD ₅ /5 mg/l NH ₃ -N/5 mg/l DO
25,000 gpd or less	Jan.- April: 20 mg/l CBOD ₅ /10 mg/l NH ₃ -N/5 mg/l DO
	secondary limits year round

The limitations will be the same as the previous permit.

Vermilion River TMDL for Fecal Coliform

The *Vermilion River TMDL for Fecal Coliform* was finalized on April 5, 2001, addressing the presence of pathogen indicators in the watershed. As per this TMDL, "...there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL." Therefore, Fecal Coliform effluent limitations will be permitted according to the current state policy.

TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin

As per the *TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin*, "point source loads are so small as to be insignificant, and because effective policies are in place to limit TSS discharges, no specific reductions from point sources are required." Therefore, TSS limits will be established in this general permit according to the current state standards.

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TMDL for the Pesticide Carbofuran in the Mermentau and Vermilion-Teche River Basins

The TMDL for the Pesticide Carbofuran in the Mermentau and Vermilion-Teche River Basins was finalized on March 21, 2002, and states no point sources are known to discharge Carbofuran; therefore, no allocation was given to point source discharges in the Vermilion-Teche River Basin.

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg.	Weekly Avg.	Basis
CBOD ₅ May- December January- April	10 mg/l 20 mg/l	15 mg/l 30 mg/l	Previous LPDES Permit LA0078034, Issued February 3, 2004
TSS May- December January- April	15 mg/l 20 mg/l	23 mg/l 30 mg/l	Previous LPDES Permit LA0078034, Issued February 3, 2004
Ammonia-Nitrogen May- December January- April	5 mg/l 10 mg/l	10 mg/l 20 mg/l	Previous LPDES Permit LA0078034, Issued February 3, 2004
Dissolved Oxygen*	5.0 mg/l	N/A	Previous LPDES Permit LA0078034, Issued February 3, 2004

Concentration limits are used in accordance with LAC 33:IX.2709.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express BOD₅ and TSS in terms of concentration.

*This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Daily Maximum) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

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2) pH

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.).

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0078034: Issued: February 3, 2004
Expires: February 28, 2009

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Monthly Avg.</u>	<u>Weekly Avg</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	1/week	Measure
CBOD ₅				
May- December	10 mg/l	15 mg/l	2/month	Grab
January- April	20 mg/l	30 mg/l	2/month	Grab
TSS				
May- December	15 mg/l	23 mg/l	2/month	Grab
January- April	20 mg/l	30 mg/l	2/month	Grab
Ammonia-Nitrogen				
May- December	5 mg/l	10 mg/l	2/month	Grab
January- April	10 mg/l	20 mg/l	2/month	Grab
Fecal Coliform Colonies	200	400	2/month	Grab

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the most recent inspection of the facility was performed on April 20, 2007. The following was noted:

- Permit is on site and up to date; expires end of February 2009.
- Sampling and reporting being done as required.
- Excursions for TSS, Fecal, DO, and Ammonia were reported during 2006 reporting period.
- Effluent was clear at the time of the inspection
- 3 out of 4 tubes contained chlorine in the chlorine contact chamber
- Receiving ditch was full of sludge
- No record of sludge wasting
- Plant has two operating wet well pumps and aerator blowers
- Good mixing in aeration basin; free of floatables

B) Compliance and/or Administrative Orders

A review of the files indicates that no recent orders have been administered against the facility.

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C) DMR Review

A review of the discharge monitoring reports for the period beginning July 2006 through June 2008 has revealed the following violations:

Parameter	Outfall	Period of Excursion	Permit Limit	Reported Quantity
D.O. (minimum)	001	July 2006	5 mg/l	3.88 mg/l
Fecal (monthly)	001	July 2006	200	331.7
Fecal (weekly)	001	July 2006	400	550.0
TSS (monthly)	001	October 2006	15 mg/l	20.95 mg/l
TSS (weekly)	001	October 2006	23 mg/l	37.00 mg/l
Fecal (monthly)	001	January 2007	200	294.6
TSS (monthly)	001	March 2007	20 mg/l	69.00 mg/l
TSS (weekly)	001	March 2007	30 mg/l	128.00 mg/l
Ammonia-Nitrogen (monthly)	001	March 2007	10 mg/l	15.10 mg/l
Ammonia-Nitrogen (weekly)	001	March 2007	20 mg/l	24.70 mg/l
Fecal (monthly)	001	March 2007	200	TNTC
Fecal (weekly)	001	March 2007	400	TNTC
CBOD ₅ (monthly)	001	March 2007	20 mg/l	27.5 mg/l
CBOD ₅ (weekly)	001	March 2007	30 mg/l	50.0 mg/l
D.O. (minimum)	001	September 2007	5 mg/l	4.80 mg/l
TSS (monthly)	001	October 2007	15 mg/l	18.00 mg/l
TSS (monthly)	001	December 2007	15 mg/l	74.00 mg/l
TSS (weekly)	001	December 2007	23 mg/l	74.00 mg/l
Fecal (monthly)	001	December 2007	200	988.0
Fecal (weekly)	001	December 2007	400	988.0
TSS (monthly)	001	February 2008	20 mg/l	21.00 mg/l
D.O. (minimum)	001	February 2008	5 mg/l	4.44 mg/l

No samples were collected during May 2008.

XII. ADDITIONAL INFORMATION:

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

In accordance with LAC 33:IX.2903., this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b) (2) Cc and CD); 304(b) (2); and 307(a) (2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

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1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit; or
3. Require reassessment due to change in 303(d) status of waterbody; or
4. Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

Please be aware that the Department has the authority to reduce monitoring frequencies when a permittee demonstrates two or more consecutive years of permit compliance. Monitoring frequencies established in LPDES permits are based on a number of factors, including but not limited to, the size of the discharge, the type of wastewater being discharged, the specific operations at the facility, past compliance history, similar facilities and best professional judgment of the reviewer. We encourage and invite each permittee to institute positive measures to ensure continued compliance with the LPDES permit, thereby qualifying for reduced monitoring frequencies upon permit reissuance. If the Department can be of any assistance in this area, please do not hesitate to contact us. As a reminder, the Department will also consider an increase in monitoring frequency upon permit reissuance when the permittee demonstrates continued non-compliance.

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** shall remain as previously permitted.

Effluent CharacteristicsMonitoring Requirements

	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow	Continuous	Recorder
CBOD ₅	2/month	Grab
Total Suspended Solids	2/month	Grab
Ammonia-Nitrogen	2/month	Grab
Dissolved Oxygen	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

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Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Total Environmental Solutions, Inc., Hummingbird Subdivision, June 19, 2008.